Flightfax
ARMY AVIATION RISK-MANAGEMENT INFORMATION
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Learning from Other's MISTAKES

SPECIAL EDITION OF WAR STORIES

Flightfax

ARMY AVIATION RISK-MANAGEMENT INFORMATION

BG Joseph A. Smith – Commander and Director of Army Safety
COL John Frketic – Deputy Commander
Dennis Keplinger – Publishing Supervisor
Paula Allman – Managing Editor
Julie Shelley – Staff Editor
Danny Clemmons – Graphics
e-mail - flightfax@safetycenter.army.mil
http://safety.army.mil

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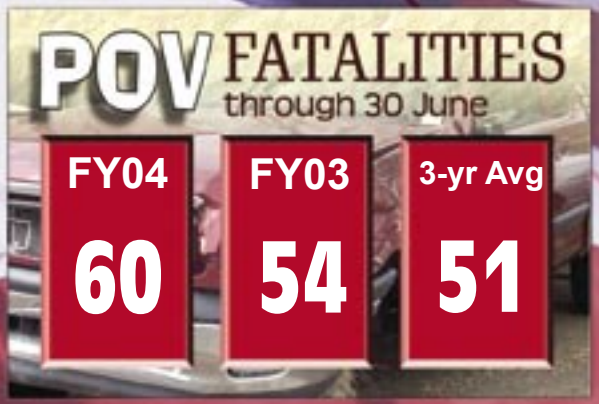

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JOSEPH A. SMITH
Brigadier General, U.S. Army
Commanding

DASAF's Corner

FROM THE DIRECTOR OF ARMY SAFETY

Is Perception Reality?

In the opening month of Operation Iraqi Freedom (OIF), I served in theater as an assistant division commander for the 82d Airborne Division. Four days after "G-day," I had the opportunity to visit a company of Soldiers from an Apache Longbow battalion that had been in a difficult battle south of Baghdad. Several aircraft in the company were damaged beyond immediate repair and not all of the mission's objectives were met. As a senior leader, I wanted to know what had happened.

The platoon leader who'd led the first aircraft into the battle was particularly frustrated. Here's how he described the mission: The joint suppression of enemy air defense (J-SEAD) was fired too early and was, therefore, ineffective; and close air support (CAS) was unavailable during the mission time window. The lack of synchronization gave the enemy time to react, creating a hornet's nest directly around the Apaches' battle positions and routes of flight. I asked him what he thought we needed to do differently. "Sir," the lieutenant stated bluntly, "we need to start by disbanding the Safety Center!" The lieutenant had no way of knowing that I would soon become the commanding general of the Army Safety Center.

Did the Safety Center cause a lack of J-SEAD synchronization or establish CAS allocations for the night? Obviously not. However, the lieutenant felt that so many good home-station training events had been cancelled or watered down "in the name of safety" that the unit was not ready to conduct difficult combat operations. He felt the Army was more worried about fratricide than about killing the enemy. He believed we practiced risk aversion rather than risk management. The platoon leader attributed the mission's planning failures to an institutional attitude, and he felt the roots of that attitude began at the Safety Center.

That was his perception … but is it reality? That Apache platoon leader's words have echoed through my head for the last 10 months as I've traveled across our Army. If you listen closely, you will hear echoes of "safety" as a bad word among our junior leaders. They feel safety is a constraint rather than a combat multiplier for mission accomplishment; safety either slows them down or doesn't allow them to train on the razor's edge; and in combat, they think there just isn't time for safety. Since many junior leaders feel safety is a bad word, it's not being embraced down where the rubber meets the road.

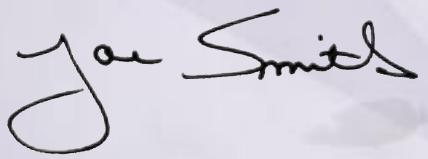
Very little in life is true black or white—perception or reality depends on where you sit. We must work hard to balance the risks of our profession. As leaders get more time on task, their experience allows them to see a bigger picture—one a lieutenant or squad leader cannot yet see. An aviation lieutenant might complain when a battalion commander tells him that he must fly 200 feet above ground level (AGL) until he arrives at the battle position. The lieutenant believes this restriction reduces the quality of his training. However, the battalion commander knows that even in the 160th Special Operations Aviation Regiment (SOAR), missions are flown well above the highest obstacles and wires until it's absolutely mission essential to do otherwise. If the 160th SOAR enters a low-level flight profile, it's only after detailed threat planning and careful risk management. If the battalion commander fails to make the lieutenant understand the big picture, the lieutenant will walk away viewing safety as a constraint to getting the job done rather than effective risk management. If junior leaders don't embrace safety, they won't enforce safety during the 23 hours of the day when senior leaders aren't watching. This is what I see happening across our Army.

In last month's issue of *Flightfax*, I stated that the actions of our junior leaders would determine the success of the Army Safety Campaign. Inspiring junior leaders will require senior leaders to engage them with discussion, education, and mentorship. It will take both good old-fashioned leadership and some out-of-the-box thinking. The Army Safety Team has some great tools to help—check out our Web site at **https://safety.army.mil**. Our Web-based tools can help coach leaders on how to conduct their challenging missions safer and in a manner the digital generation will find interesting and intuitive. In another initiative, U.S. Army-Alaska (USARAK) recently held a junior leader safety council to establish "bottom-up" initiatives and a peer-teaching program. This might be worth a shot in your unit.

The Chief of Staff, Army, GEN Peter Schoomaker, emphasizes training hard and to standard. He doesn't want our Soldiers to be risk averse, so let's get the job done. Embed risk management in all you do. Make standards and discipline your control measures. Question things that appear to hide behind safety or that inhibit realistic training, because in combat you'll fight like you've trained.

The current accident trend is on course to be our worst in 10 years. To curb that trend, we must stimulate a culture change among our Soldiers and junior leaders. We must do more than just teach safety—we must inspire safety.

Our Army is at war. Be safe and make it home!



WAR Stories

There I was...

Ever hear the saying that there are bold aviators, and there are old aviators—but never old, bold aviators? Well, there is some truth to that. Perhaps the old, bold aviator was just plain lucky at times and was able to beat the odds. Aviators often relearn the lessons of those who have come before them through their "There I Was" experiences. These experiences often come with a high level of pucker factor, solidifying these lessons for a lifetime. Some stories are in the spotlight for all to see; others you'll only hear about when you buy that old guy another round. Either way, war stories have two things in common: They are tales of how a crew came together to handle a critical situation and lived to fly again, and they have lessons that can be passed on. These war stories can have a profound effect on all of us if we listen and learn from them. It's the pilot who believes he's so good that it can't happen to him who will grace a future edition of *Flightfax*!
Here are some of those stories...

Respect the Weather

CW3 Kenneth R. Czarnecki
DES, Fort Rucker, AL

For the past 20 years, I've flown all types of missions including anti-submarine warfare, medical evacuation, VIP flights, and air assaults. I've had my share of "I won't do that again!" encounters with deteriorating weather while flying visual flight rules (VFR) during day and night under night vision goggles (NVGs). It's true that we Army Aviators can't do anything about the weather, but we can—and must—respect it and learn all we can about it. The unpleasant fact is that some of us haven't developed the necessary professional respect because we haven't fully learned what

adverse weather can do. Army Aviators often push themselves and the aircraft to their limits and go "scud running" when better judgment would've been to turn around.

If anyone has flown to Fort Drum, NY, they can attest that in the "north country," weather patterns can change quicker than you can key the mike and say "PIREP." Fortunately, luck was with us one night. The story goes something like this:

There I was, in a typical NVG training flight of five. Inadvertent instrument meteorological conditions (IIMC) were not briefed because the weather was forecasted to be good. Oh, how wrong we were! As we turned the corner and headed down "the bowling alley," the weather quickly deteriorated. Looming on the horizon was an ominous mass of black clouds. At that point, the radios erupted with chatter. "Lead, IMC!" "Chalks 2 and 3, IMC!" I was in Chalk 2 undergoing my NVG mission training, flying through an unexpected rain shower when I suddenly lost the ground. I announced, "Right seat, IMC!" Then my CW2 instructor pilot (IP) stated "Left seat, IMC!" The two crew chiefs had lost the ground as well.

The flight completed multi-ship IIMC breakup procedures according to the standing operating procedures, and I executed the attitude, heading, torque, and airspeed measures I'd been taught in flight school. When we finally broke out of the clouds—after what seemed like an eternity—I rejoined my flight and flew back to Wheeler Sack Army Airfield. After finally breathing again we held a nervous, yet educational, debrief. The company standardization instructor pilot (SP) vowed, "I don't care what the weather is, we will *always* brief IIMC from now on!"

When faced with deteriorating weather during flight, deciding the best course of action is not always easy. Can you safely circumnavigate the storm? Should you land at an alternate airfield, or should you turn back? One important criterion to help you reach the right decision is to ask yourself if continuing the flight would cause you to rely on luck to ensure your safety. If the answer is yes, then you'd better make another decision. And the importance of your decision cannot be overemphasized. If you're to head for an alternate field or make a 180-degree turn, the time to do it is before you get caught inside a storm. Once trapped, you're committed to continue. There's no turning back!

Control of the aircraft is the most important factor in recovering from unplanned flight into IMC. If you fail to make this transition, you are in serious trouble. Control is maintained by leveling the wings on the **Attitude** indicator; maintaining the **Heading**—turning only to avoid known obstacles; adjusting **Torque** to climb power; and adjusting the **Airspeed** to climb airspeed.

As the standardization officer for one of the battalions deployed to Poland during Victory Strike III, I had the pleasure of watching the brigade commander award coins to two UH-60 Black Hawk crews that went inadvertent IMC. They had done it right! They relied on their training and executed procedures that brought their crews and aircraft safely back home.

Sobering facts for Army and civilian aviation

In my research, I came across some sobering facts for Army Aviation. From fiscal year 1991 to 2001, the Army had an alarming number of IIMC-related mishaps. The cost was more than $141 million in aircraft and crewmember losses. Why were these happening?

During the last 10 years (FY94 to present), the Army lost 31 soldiers to IIMC-related mishaps. Just recently, IIMC claimed another Army crew. A UH-60 Black Hawk was lead in a flight of two when radio contact was lost during IIMC procedures. Aircraft wreckage was located approximately 24 hours later with no survivors onboard.

Let's put this into perspective. According

to AR 385-40, *Accident Reporting and Records*, Table 2-1, "Cost Standards Table," the Army pays $1.1 million to train a pilot and $125,000 for every enlisted crewmember. This is a direct cost and doesn't include the cost of the loss of experience and training of new personnel. That means from a strictly fiscal standpoint, the Army keeps losing valuable soldiers to IIMC incidents that bear a cost in not only the airframes destroyed, but more importantly the tremendous loss of a trained Army Aviator and Soldier.

In the civilian community, the numbers are shocking. From 1991 to 2001, the National Transportation Safety Board had the tragic job of cataloging 19,972 general aviation accidents. Of those, 4, 771 accidents and over 30 deaths were due to weather. Low ceiling and visibility are one of the leading causes of 1,525 weather-related accidents. Alarmingly, in 1,979 of those weather-related accidents, the pilots never received a weather brief. Common sense and professionalism could have prevented nearly 42 percent of those accidents.

I bet you've heard the following excuses: "Aw, I don't need a weather brief, look at that sky." "I know where we are; I don't need to update the weather, we'll be okay." "The weather isn't coming in that fast, we should make it." Those confident words can end up being deadly!

Historically, IIMC was always the "had-to-brief" contingency. Yet, sometimes it was the forgotten part of the brief or the last thing mentioned while everyone was looking at their watches. "Oh, we'll brief IIMC at Flight Lead's aircraft at the update; the weather is fine anyway." Unfortunately, IIMC is seldom rehearsed as a flight or crew. Remember, the cockpit of an aircraft during inadvertent IMC is no place to make last-minute changes. Rely on the old admonition of "plan the flight, and fly the plan."

Prepare crews

In the book *Breaking the Phalanx*, Douglas Macgregor (COL, U.S. Army, Ret.) mentored us to "Equip the man, not man the equipment." With that in mind, the Army expects and equips UH-60 aircrews to go IIMC. AR 700-138, *Army Logistics, Readiness, and Sustainability*, defines the role of the UH-60 as a transport for personnel, cargo and equipment, and medical evacuation, and also to serve as an air ambulance service under visual meteorological conditions (VMC) and IMC.

Conversely, the AH-64 and OH-58D aircraft communities don't routinely participate in missions involving IMC. Commanders can prepare the attack and scout crews by requiring specific hood training at the end of missions. The real benefit of this is that the crews become more comfortable talking to approach control and organizing their cockpits for IMC. Modifying attack and scout aircraft to instrument flight rules (IFR) standards would be part of the answer.

The key is confidence. If the crews are not confident, all the IIMC briefings in the world won't help. Before Desert Storm, Army Aviation pilots in command (PCs) averaged 3,000 hours of accrued flight time. Around 1993, that average fell to 1,400. Today, Army PCs have an average of 400 hours' experience.

Army Aviation must promote safeguards and improvements to protect the force and successfully develop technology, organization, training, and leadership. Commanders should task SPs, IEs, IPs, and instrument unit trainers to develop an aggressive instrument training program with synthetic flight training systems (SFTS) scenarios, no-notice instrument evaluations, end-of-mission training opportunities, and academics. Training IIMC as a flight is a confidence builder and should be trained regularly. The Army cannot afford to lose any more soldiers to this unpredictable and deadly enemy. Army Aviation must equip and train our aviation warriors properly; however—and most importantly—aviators must respect the weather and know their own limits. ♦

—CW3 Czarnecki is a UH-60A/L SP/IE for the Directorate of Evaluation and Standardization (DES) at Fort Rucker, AL. He can be reached at DSN 558-1748 (334-255-1748) or e-mail kenneth.czarnecki@rucker.army.mil.

Not My Day

Jon Blake
U.S. Army Safety Center

Somewhere in the deep fog that enveloped my brain I could hear someone saying, "The MEDEVAC crew said this guy was flying a helicopter that hit a tree. It appears he has no movement below the waist, so we need to look closely at his back."

When I heard that, something in the back of my mind reminded me that I was a helicopter pilot and should be concerned. I tried to wake up and shake off the confusion, but I couldn't. I then heard another voice say, "I think he has a torn ascending aorta." Someone else said, "No, I think the blood is coming from somewhere else." I didn't know much about medicine or gross anatomy, but I did remember from aeromed and safety training that there are a couple of things that cause people to die in a crash. One is a violation of living space, such as a crushed cockpit. The other is exceeding tolerable G forces, which causes organs and other parts—such as the heart, lungs, and aorta—to tear away from their attachment points. Whatever was wrong, the situation wasn't good.

Still in an inexplicable haze, my brain tried to capture all the sounds and put everything together, but it just couldn't. Who were these people talking about? Why couldn't I open my eyes? When I heard someone ask for "the patient's" name and social security number, the response was just enough to jump-start my brain. They were talking about me! That, coupled with some guy sticking a foul-smelling swab under my nose, immediately brought me back to life. At first I couldn't focus on anything; the lights were too bright, and there were people milling around who looked concerned and busy. The scene looked like something on the TV show "ER," except I was part of the cast.

My brain was still too slow to capture most of the information being presented. Everything was in slow motion. I felt someone tugging at my flight suit. I realized the suit was being cut off my legs. I tried to move, but couldn't. I tried to stop him, but couldn't. Next, some guy wearing BDUs and a white coat asked me if I knew my name. "What a stupid question," I thought. "Of course I know my name. It's…?" Then he asked if I knew where I was—another seemingly simple question. If it was so simple, why couldn't I give him an answer? I wanted to give this guy my name; it was right there on the tip of my tongue, but I just couldn't get it out. This must have struck me as funny, because I started laughing out loud. The other guy must have thought it was funny too, because he started laughing.

As my brain began to awaken, I became more aware of my surroundings. And, as quick as a lightning strike, the pain began to surge up my back and into my brain. The pain felt like a combination of a knife and burning torch being stuck into my back. The doctor sensed my sudden reaction to the pain (probably because of the loud, shrill cry that extended over the entire hospital) and ordered more morphine. After a few minutes he came over, introduced himself, and asked me if I knew what had happened and where I was. Sure I did—what kind of idiot did he think I was? I

just couldn't get the words out. He then asked me if I knew his name. What was up with these questions? "Sure, you just told me! It's…?" I couldn't remember. This went on for several hours.

After several more hours I became aware of what had happened the preceding day. I was in a helicopter crash. My back was broken in three places. I couldn't move my legs. Several of my ribs were broken, and one of my lungs collapsed. I also had suffered numerous other internal injuries. When the surgeon told me I would probably never walk again, I became just a little concerned. Fortunately, he was wrong. I did get my legs back, although I still don't have feeling in some parts, especially the outer portion of my feet. I didn't have to learn to walk again, but I did have to relearn how to balance with no feeling in my toes and heels.

Now, what does all this have to do with tree strikes? Duh—don't hit the trees! It sounds uncomplicated, but something as simple as poor crew coordination can quickly bite you in the butt (or tail rotor) and ruin your day, or the rest of your life.

My accident was caused by two major factors:

■ **Failed crew coordination**. When asked to reposition the helicopter, neither my copilot nor I completely cleared the aircraft, although each thought the other had. The tail rotor struck the only tree within 500 miles. The gearbox, vertical fin, and everything aft of the horizontal stabilator separated from the aircraft, and I had the wildest 3.8-second ride of my life.

■ **Fatigue**. We were both standardization instructor pilots, so the standing operating procedure allowed us to fly longer than the normal 8 hours per day. We were entering our ninth flight hour at the time of the accident and, even though we both felt fine when the commander asked us to extend the flight, neither realized the true effects of fatigue.

The bottom line is that tree strikes can kill you in an instant. I was lucky, but I'll suffer the effects of that accident for the rest of my life. Don't let mission creep, the other guy, or simple fatigue put you in the hospital or the grave (see AH-64 video "Oh Ye of Little Faith" on the Risk Management Information System Web site at **https://rmis.army.mil/**). ♦

—Mr. Blake is the Program Manager for Strategic Communications at the U.S. Army Safety Center and a retired CW4 Master Army Aviator. He may be reached at DSN 558-3770 (334-255-3770) or e-mail jon.blake@safetycenter.army.mil.

A Buffet of Trouble

CW3 John Priestner
A Co., 3/229th ATKHB
Fort Bragg, NC

It was one of those plum assignments. Our National Guard unit was tasked to provide an AH-1 Cobra for an air show. This type of tasking doesn't come down very often, so everyone in the unit wanted to do it. Where else could you get paid to go to an air show? You get free food, lodging, and a rental car. What a deal! I happened to be in the right place at the right time and was selected to go.

Our mission was to fly the Cobra to the host airport on Friday night, spend the weekend, and fly back on Sunday afternoon. During the air show we were to stay by the aircraft and answer questions. What a great way to spend a weekend.

I arrived at our facility around 1600 and inquired about the other pilot. He hadn't arrived yet, and no one was sure when he'd be there. He was driving in from a major city located about 2½ hours away. While I was waiting, I started preparing for the flight. I got the logbook and looked at the weather. It was a beautiful day, and there was no weather forecast within our location. I went out to the aircraft, conducted the preflight, and stored my equipment.

It was getting late, and I was concerned about the other pilot. Someone at flight operations told me an accident had occurred on the interstate and there was a traffic delay. This wasn't welcome news, because I'd been briefed not to depart after dark. The Cobra didn't have a night system, and we didn't have goggles.

I continued to prepare for the flight anyway. I wanted to be ready to leave as soon as the other pilot arrived. I filled out the performance planning card and filed the flight plan. Then I started looking at the route. Our destination was approximately an hour and half north. Since the Cobra had only an automatic direction finder available for navigation and the flight would probably end during the night, I looked for non-directional beacons (NDBs). There were only a few available. Due to the NDBs' limited range, the flight would have to be a lot longer if we used them to get to the airport. This was unacceptable! We had to get there early so we could enjoy the reception buffet for the air show's pilots. It was not to be missed! Just then a brilliant idea occurred to me. The destination airport was just off a major interstate. Our facility was located on the same interstate. How hard could it be to follow a major interstate?

The other pilot, who had been tied up in traffic, finally showed up at 1730. We got his equipment and headed out to the aircraft. We did a walk-around, briefed the mission, and talked about the route. We decided to follow the interstate. We also talked about not departing after dark. "Dark" can be a little subjective—after all, what quantifies dark? We looked at each other and decided it wasn't dark yet (we were both thinking about that buffet!). So we jumped in, ran up the aircraft, took off, and headed north.

We might have convinced ourselves it wasn't dark at the airfield, but it was pitch black

downwind. It didn't take long to realize this wasn't going to be as easy as we thought. A layer of scud clouds was forming in the valleys along the interstate. These clouds were very low and didn't cover the ground, but they did force us to fly higher.

It didn't take long to lose the interstate. We were trying to keep on the map as we continued to fly north and slow down. The land north of our airfield is predominantly state game lands, which are densely forested with no big roads or landmarks. And did I mention it was very dark? There were hardly any lights at all. It doesn't matter how big the interstate or how small the road if it's dark and there are only a few cars. A one-lane road looks the same as an interstate if only one car is driving on it.

This was not a pretty picture. We had moved too far north to use our airfield's NDB, and we couldn't reach another to help us navigate. We were over a densely wooded area with very few lights. We had about 75 minutes of fuel remaining, with at least 30 minutes of flight left before us *if* we found our way. We were circling and praying we could find something on the map to orientate us. We also were worried that we might accidentally run into the airspace to our east, which belongs to a large airport. But we couldn't call them, because then we'd have to admit we didn't know where we were!

We continued to move slowly north. I finally noticed a large group of lights to the east. It looked like a mining facility that I'd passed on my way to our airfield. We moved to the east and were able to positively identify the mining facility. It was still very hard to see the interstate due to the cloud layer and the lack of traffic, but at least we were able to place ourselves on the map. The good feelings didn't last, however; we quickly lost the interstate again.

We flew a time distance for several minutes and finally decided to try our destination airport's approach control. We told them we were to their southwest and prayed they would be able to get us on radar. They came back with radar contact 19 miles to the southwest. What a relief! We asked for vectors to the active. (I don't think many pilots request radar vectors from 19 miles out unless they're lost!)

The bottom line is that complacency kills. We always kid each other about "get-home-itis" and cheating death, but rules are made for a reason. Always follow your standing operating procedures and be prepared for changes. Never plan to follow roads as a primary navigation tool, and don't take unnecessary risks such as night flying. Also, admitting a mistake is much better than dying—that night, we let our pride affect our judgment.

The rest of the flight was uneventful. We landed with 20 minutes of fuel left, even though the flight had been almost twice as long as planned. But we missed the buffet.

The bottom line is that complacency kills. We always kid each other about "get-home-itis" and cheating death, but rules are made for a reason. Always follow your standing operating procedures and be prepared for changes. Never plan to follow roads as a primary navigation tool, and don't take unnecessary risks such as night flying. Our flight could've been delayed until morning. Also, admitting a mistake is much better than dying—that night, we let our pride affect our judgment. We didn't call approach control sooner because we didn't want anyone to know we were lost. An accident is often the result of a chain of events, and we certainly tested this theory that night! I'm just glad we were able to learn from this experience and apply it throughout our aviation careers. Maybe you can learn something too. Fly safe! ♦

—CW3 Priestner may be contacted via e-mail at john.priestner@us.army.mil.

It's Combat, We'll Be Okay!

CW4 Robert Morriss
DCMA, Boeing
Philadelphia, PA

"What were we thinking? How in the world did we get in this situation?" Those were my thoughts while I was part of a flight of 18 CH-47Ds during the first Gulf War. This ill-planned flight was conducted at night with helicopters from two different units. Fifteen of the 18 crews were using NVGs, while the other 3 were flying unaided. Before the night was over, I realized that we almost crashed three times. Here is why the situation was so dangerous.

The three unaided CH-47s were placed as Chalks 2, 3, and 4, with Chalks 5 through 18 wearing NVGs. It gets worse! I was a maintenance officer in Chalk 2, flying a broken CH-47D that was left behind because of numerous maintenance problems. Some of the maintenance issues were night-flight related. Sheer luck kept a catastrophe from happening that night, for when we awoke the next morning, we found ourselves positioned underneath two huge sets of transfer power lines. Just a few hours before, we were flying blind and had no clue those lines even existed!

Here's a brief synopsis of the situation that led to this mismatched formation. We were positioned at the West Heliport in Saudi Arabia. Our parent unit had advanced, leaving us behind with three unserviceable CH-47s. The plan was for our unit to establish a forward area, and then later send a contact team for aircraft recovery purposes. The maintenance faults among the three -47s varied; my helicopter had an inoperative radar altimeter, no power turbine inlet temperature (PTIT) indication on the number one engine, and inoperative power transfer units (PTUs) for both hydraulic systems.

The day prior to the air campaign, the West Heliport housed approximately 90 different helicopters from numerous units. About midday, we noticed that most of the other helicopters were scrambling at a fast pace. Hence, we went to the adjoining CH-47 company for information. We were told that every helicopter had to be evacuated off the heliport at all costs. At that time, we were told the Iraqis were planning to bomb the area early the next morning. Their company commander suggested that we scatter with the aircraft later that night. Our officer in charge agreed.

I soon discovered this was a bad plan. Chalk 1 was aided, but Chalks 2, 3, and 4 were unaided, relying directly on Chalk 1 alone for navigation and obstacle clearance. If that wasn't enough, shortly after takeoff I realized I had a fairly inexperienced copilot. He couldn't hold position in the formation, and we immediately lost sight of Chalk 1. Luckily, Chalk 1 turned his position lights up bright as we closed in on him. Additionally, our engine torque and rotor RPM kept fluctuating, so I took the controls to try and catch Chalk 1 and diagnose our problem.

I glanced in for a moment, realizing the RPM changes were self-induced by the copilot. I assumed immediately that I was single pilot and kept the controls while flying staggered left, which placed me flying cross-cockpit off of Lead. I estimate we kept about one and a half to two rotor disk separations. This separation was comfortable because I had flown with the pilot in Chalk 1 in a previous assignment. However, with task overload, he completely forgot that several of the aircraft behind him had no NVGs. This became apparent when I saw my position lights illuminate a set of power lines as they passed 5 feet below my chin bubble! I immediately informed Chalk 1 that we had just barely cleared the wires and reminded him of the scenario. The plan was to fly 90 miles and land to the left side of a perpendicular road.

The landing zone (LZ) had a reconnaissance performed the day before and was free of obstacles.

Since we were unaided, we were completely dependent on Lead's judgment. Approximately 10 minutes prior to landing, I briefed the crew on my intentions. If Lead browned out, we had no choice but to either land or conduct a massive instrument takeoff (ITO) and call out our heading and altitude.

I also told my copilot to retract the searchlight while on short final so it wouldn't blind us with reflection from the dust. The searchlight controls were on his thrust lever, and I had no access to them. Realistically, I knew if Lead browned out we would absolutely have to land. Otherwise, there would be 3 CH-47s flying blind and 15 others for us to hit. Furthermore, as Chalk 1 turned right for final, I maintained one rotor disk separation to keep visual. As he came close to the ground, I backed off to approximately three rotor disk separations. That's when things got crazy.

As I expected, Chalk 1 browned out so bad that I lost sight of him. Now I'm unaided, no radar altimeter, with an extremely inexperienced copilot in the middle of the night, with only one real choice—land! Just when I thought things couldn't get any worse, my copilot turned on the white light and moved it directly in front of my windshield. I had my hands full or I would've punched him! I repeatedly screamed over the intercom, "Retract the search light!" However, he had frozen stiff! I finally changed hands on short final and, flying with my left hand, I reached across and retracted the light. It's hard to explain, but the reflection off the blowing dust had completely blinded me. I kept the helicopter in a landing attitude, and when I felt the aft gear touch down, I kept us level and lowered the thrust lever.

I remember thinking that we'd made it, that the worst was over. That thought lasted about 2 seconds. Now, 17 other CH-47s were trying to land on us like a huge navigation aid. It got so bad that I finally had to turn on the anti-collision lights. And since they were landing all around us I had to leave the rotor RPM at full flight, which caused even more blowing dust. It took approximately 25 minutes of Chinooks flying chaotically in circles to land the entire flight.

We were extremely lucky! Lead had missed the initial LZ and relied completely on his inaccurate Doppler. The flight had flown 5 miles off track and landed along the wrong road. Not once did anyone mention over the radio that massive power lines bordered only meters to the north. If any of the three unaided crews had conducted an ITO or go-around, they would've absolutely perished.

Once we shut down, I said a few prayers and went to bed exhausted. The next morning when I awoke, I spotted two massive sets of transfer power lines positioned directly above and in our immediate flight path. I looked behind us to see two huge 40-feet-long trenches cut by our aft landing gear. In turn, the other two unaided aircraft had landed directly behind us, following the same 'land at all costs' thought process. One of them landed in a depression and the forward rotor blades came to rest only a couple of feet from the ground. All three of us had left long skid marks, which were made in our desperate attempt to land at all costs.

We were extremely lucky! Lead had missed the initial LZ and relied completely on his inaccurate Doppler. The flight had flown 5 miles off track and landed along the wrong road. Not once did anyone mention over the radio that massive power lines bordered only meters to the north. If any of the three unaided crews had conducted an ITO or go-around, they would've absolutely perished. This was all in the name of combat necessity. I still get chills when I think about it. ♦

—CW4 Morriss is a CH-47 Maintenance Test Pilot for Defense Contract Management Agency (DCMA), Boeing. He may be reached by calling 210-845-6946 or by e-mail at Rob.morriss@us.army.mil.

The "Bad Old Days"

Robert Bailey
Yuma Proving Ground, AZ

It's an all-too-familiar story—a case of "get-there-itis" that almost cost two pilots their lives. Only in this story, I was one of those pilots. Read on and learn from my mistakes!

My copilot and I had a mission to support a recruiting office in Seattle, WA, by staging a static display in a shopping mall parking lot. We left our airfield early in the morning in our show aircraft, an AH-1G. The weather conditions at launch time were barely legal, but the forecasters were calling for conditions to improve throughout the morning.

We followed Interstate 5 north through Tacoma, scud-running all the way. As we got further north, however, the conditions didn't improve—in fact, they got substantially worse! At one point we were dodging light poles at a freeway interchange.

As you can probably guess, things only got worse from there. We were near the approach end of Seattle-Tacoma Airport when we realized heavy jets would be coming in very low. We hadn't contacted their approach control, so climbing the aircraft for an instrument flight rules recovery was no longer an option. Looking down at the freeway only compounded our sense of disorientation.

The dominoes kept falling. We saw high-tension power lines looming in the haze. We couldn't go over or under, and we couldn't stop or go on. With gritted teeth we inched over what we thought was the top strand, only to see another wire higher up. Moving on pure inertia, we eased the last few feet over the top wire just as we lost visual contact with the ground. Descending cautiously back to where we could see the ground, we came to a high hover and agreed to park the bird and wait the weather out. A small hole opened, and we parked in a shallow valley for a couple of hours.

The rest of the trip was uneventful, but while we were on the ground waiting for the weather to clear, we discussed a few points. I'll share those with you.

- The weather man can be either right or wrong, but there is no in between. If he's right, that's great. If he's wrong, it can cost you a lot, including your life!
- There are only a few missions worth risking death to accomplish. A Saturday at the mall is not on that list.
- This one's simple: Know where the wires are BEFORE departure!
- Crew coordination is essential when conditions are good. It becomes a matter of life and death when things turn rotten.

This story took place many years ago, before nap of the earth qualification training, global positioning systems, cell phones, crew resource management (CRM) training, universal instrument qualification for helicopter pilots, and any number of risk mitigators we now take for granted. Would any of these have helped us that day? You bet! But we would have had to use them correctly for them to work. When you think it's a pain to do all the risk assessments, mission planning, and CRM training, think about the "bad old days" and how far we've come. ♦

—Mr. Bailey is currently a civilian contractor at Yuma Proving Ground, AZ. He retired from the Army as a CW5 with just short of 6,000 hours. He may be contacted via e-mail at robert.bailey@yuma.army.mil.

News Flash!

Plan for the FY04 Army Safety Conference, 31 August to 2 September 2004. Stay tuned to the July 2004 *Flightfax* for location and agenda details.

Our Army at War
Be Safe! Make it home.

NCO CORNER

The Last One

MSG Shane Curtis
U.S. Army Safety Center

Through my years at the Army Safety Center, I've written several articles for *Flightfax*. I've always tried to emphasize that being safe is the safest way to go—it's one of the easiest ways to stay alive! We all can and do learn from each other, either through prior mistakes, lessons learned, or from good news stories.

I ask all enlisted Soldiers to take a good look at their everyday duties, the duties they're required to do in order to successfully complete their mission. Write down what went well and what didn't; then compile a list of suggestions on what can be changed for the better. Get your suggestions out to your fellow Soldiers—they can make a difference and possibly save a life. How can you do this? It's easy! Just tell your story in *Flightfax*.

Aviation NCOs have a section called "NCO Corner" reserved just for them each month in *Flightfax*. I've told most of my stories as a crewmember. Some have been good news stories, some have not. I hope something can be learned from each of them. What did I do wrong? What did I do right? What should I have done? What would've been a better way of doing it? What changes should or could've been made?

Speak up and be heard. You can make a difference in Army Aviation, and you can make this business safer for all.

Everybody has a story that needs to be told. You can save a life by telling your story. Soldiers read this magazine and learn from it. Aviation is a big field with big needs, from the platoon sergeant down to the new private. And those new privates need to start being safe today! Their leaders should mentor and shape them into tomorrow's safety managers early in their careers. We can't wait until tomorrow to be safe.

Speak up and be heard. You can make a difference in Army Aviation, and you can make this business safer for all. Chances are someone will say, "I've been there!" or "That's the same thing that happened to me!" You could tell how you used DA Form 2028 to make corrections to a technical manual and how those corrections made Army Aviation safer. The smallest change can make a very big contribution towards the safety of your fellow Soldiers. And the next life you save could very well be your own.

I soon will be closing out my military career after 26 years of active-duty service. I leave this portion of *Flightfax* to you, the enlisted Army Aviation Soldier. Please let others learn from your experiences. And, most of all, continue to fly safe! ♦

—MSG Curtis is a CH-47 Aviation Systems Safety Manager at the U.S. Army Safety Center. He can be reached at DSN 558-9859 (334-255-9859) or by e-mail at shane.curtis@safetycenter.army.mil.

Investigators' Forum

Written by accident investigators to provide major lessons learned from recent centralized accident investigations.

A "Thump" in the Night

CW5 Thomas A. McGee
Idaho Army National Guard

It was a cold Idaho night in February. The AH-64A attack helicopter crew was flying at cruise altitude—1,200 feet AGL—and had completed 1.2 hours of their planned mission when they heard and felt a "thump." They could not determine the cause or suggest a plausible reason for the noise, so they returned to the Boise airport and landed. The post-flight inspection showed a bird had struck the right pylon. The bird was most likely a goose, based on the damage and blood.

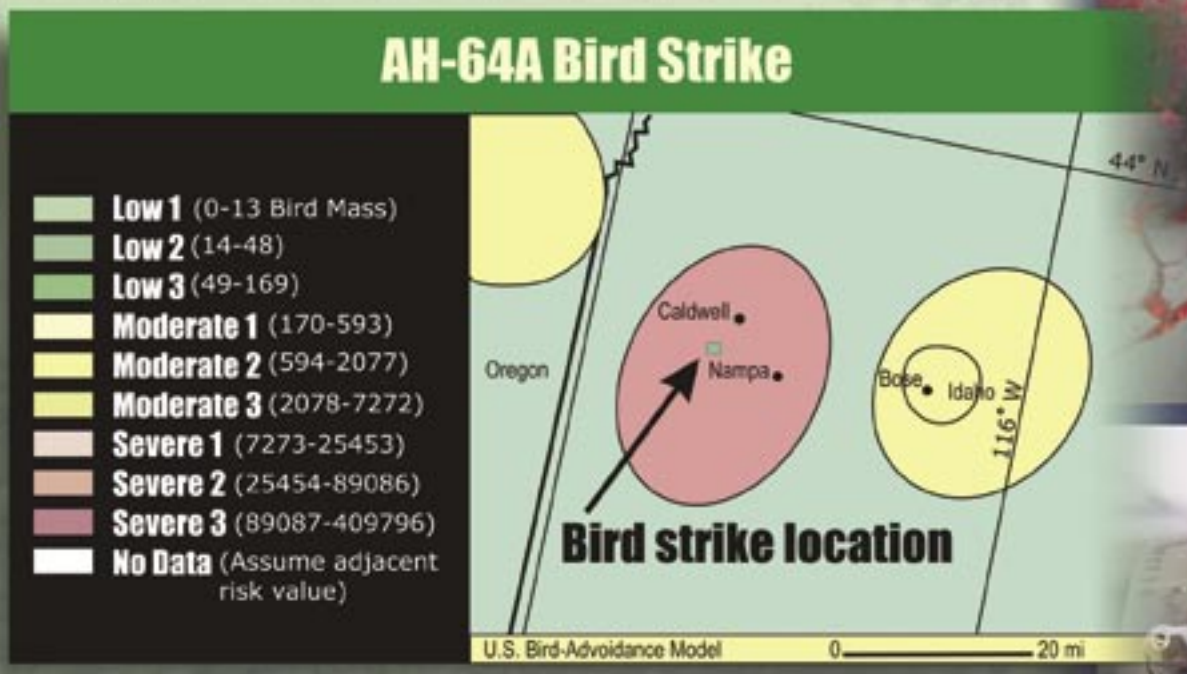
Our unit has experienced at least three bird strikes in the past 10 years. In one previous incident, the bird strike damaged an AH-64A engine inlet nacelle. In another, a bird hit the copilot-gunner front windshield, which fortunately didn't shatter. Our local flying area is close to migratory bird flyways, and these concentrations of ducks and geese contribute to the problem.

USAF Wildlife Strikes by Year

Year	Cost	Count	Cost/Count
1985	$5,452,151.00	2719	$2,005.20
1986	$18,079,969.00	2853	$6,337.18
1987	$241,045,661.00	2729	$88,327.47
1988	$4,000,668.00	2649	$1,510.26
1989	$24,880,855.00	3072	$8,099.24
1990	$7,797,017.00	2956	$2,637.69
1991	$17,953,037.00	2772	$6,476.56
1992	$24,514,446.00	2289	$10,709.67
1993	$9,506,792.00	2441	$3,894.63
1994	$16,828,509.00	2385	$7,055.98
1995	$90,687,089.19	2662	$34,067.28
1996	$7,479,091.15	3114	$2,401.76
1997	$10,339,360.66	2739	$3,774.87
1998	$25,548,135.66	3523	$7,251.81
1999	$29,936,759.37	3365	$8,896.51
2000	$34,063,781.42	3440	$9,902.26
2001	$13,412,830.41	3848	$3,485.66
2002	$10,541,941.04	3989	$2,642.75
2003	$54,975,399.28	4318	$12,731.68
2004	**$15,000.00**	**10**	**$1,500.00**

Current as of 13 January 2004

Table 1



So, what is the cost of bird strikes and how many happen per year? Table 1 shows the high number and significant cost of bird strikes in the U.S. Air Force (USAF) alone. You might think this is a problem relevant to high-flying, fixed-wing aircraft; but as shown in Table 2, as of 5 May 2004 the Army has suffered numerous bird strikes too, a total of 411 since FY92, resulting in $1,423,540 in damage.

So what can we do? A great resource is the USAF's Bird Air Strike Hazard (BASH) program found at **http://afsafety.af.mil/AFSC/Bash/home.html**. This source provides a vast array of information, from bird strikes and their costs to avoidance models that show the areas that pose the highest probability of bird strikes. The avoidance models are great tools for flight planning during peak times of the year when birds are concentrated. In fact, the area shown in the diagram above (where our most recent strike took place) is a high-risk area. We've been lucky that we haven't had a more serious accident over the years.

To help mitigate the risk we face, our new risk assessment matrix will include an element for bird strike avoidance. I would highly recommend that you review your local flying areas using the BASH program and consider that information in your flight planning. Fly safe!

—CW5 Thomas A. McGee, IDARNG/AASF, ASO/SASO, DSN 422-3970 (208-422-3970)

FY92-Present* Army Aviation Bird Strikes	
Class C	21
Class D	75
Class E	351
Total	411

*As of 5 May 2004

Table 2

Broken Wing AWARDS

Julie Shelley
Staff Editor

The Broken Wing Award recognizes aircrew members who demonstrate a high degree of professional skill while recovering from an in-flight failure or malfunction requiring an emergency landing. Requirements for the award are listed in Army Regulation (AR) 672-74, *Army Accident Prevention Awards*. The Army Review Board met recently and approved the following awards.

CW3 Rodney Swanson

82d Airborne Division
Fort Bragg, NC

Acting as the pilot in command (PC) and under night vision goggles (NVGs), CW3 Swanson was on final approach in a CH-47D during a combat air assault mission in Afghanistan. In addition to the crew, 36 paratroopers were onboard in a seats-out configuration. The aircraft was in brownout conditions when CW3 Swanson noticed a right lateral drift and took the controls, electing to execute a go-around. The dust cloud created by the aircraft caused the crew to completely lose visual references in the landing zone.

As the crew climbed through 60 feet above ground level (AGL), the #1 engine catastrophically failed and caught fire. CW3 Swanson recognized that he did not have single-engine capability or the altitude to fly out of the situation. He executed the emergency procedure for an engine failure while simultaneously pulling the #1 fire pull handle and entering an autorotation. CW3 Swanson continued with the underlined steps for emergency engine shutdown and placed the #1 engine condition lever to the STOP position. While maintaining what little rotor RPM remained under maximum gross weight conditions, CW3 Swanson applied cushioning thrust just before the aircraft impacted the ground. The aircraft was destroyed by the impact and post-impact forces. The personnel onboard, however, escaped injury.

CW3 Swanson's skill at maintaining control of the aircraft allowed it to impact in a level attitude, which mitigated the severity of the impact. He was able to accomplish this despite the lack of visual references in the brownout conditions. The entire incident lasted 3 to 5 seconds.

Thanks to CW3 Swanson's knowledge, skill, and technique, all 41 Soldiers onboard the aircraft escaped injury and death. ♦

CW3 Claude Doughty

Nevada Army National Guard
Reno, NV

Flying lead in a flight of two OH-58A+ Reconnaissance and Interdiction Detachment (RAID) aircraft, CW3 Doughty and his crew chief were returning to home station when their aircraft's vertical fin experienced a severe materiel fracture. Just prior to the incident, the trail aircraft's crew observed what they thought to be a vibration in the vertical fin of CW3 Doughty's aircraft. After repositioning their aircraft to get a better look, the second crew agreed that what they saw was probably an optical illusion. The crew decided not to alarm CW3 Doughty or his crew chief.

A few minutes later, the trail aircraft's crew noticed that CW3 Doughty's aircraft made an immediate 100-foot descent with a simultaneous 20-degree left yaw. Immediately after the abrupt maneuver, one of the trail pilots

observed that the lead aircraft's vertical fin had broken in half and was hanging to the right. The pilots contacted CW3 Doughty to inform him of the situation, at which time he regained control of the helicopter. CW3 Doughty also began to search for a suitable landing area in the mountainous terrain they had entered a few minutes before the emergency.

Since CW3 Doughty wasn't sure if the tail rotor had suffered any damage, he decided to perform a run-on landing to an unimproved area the formation had just passed. To restrict the aerodynamic forces on the vertical fin's broken half and keep it from folding back into the tail rotor, CW3 Doughty initiated a gradual descent and elected to do a 270-degree shallow left turn. Without any further damage to the aircraft, he was able to accomplish the run-on landing on a very small, unimproved dirt road that was surrounded by cattle. CW3 Doughty was able to fly his aircraft back to home station about 5 hours later after maintenance personnel arrived and replaced the vertical fin.

The mishap was recorded as only a Class D accident thanks to CW3 Doughty's sound decision-making at the onset of the emergency. ♦

CW2 Timothy Edgette
CW2 Chad Dominique
82d Airborne Division
Fort Bragg, NC

Only 5 minutes from landing and termination of an NVG mission in Afghanistan, the CH-47D flown by CW2 Edgette and CW2 Dominique experienced dual flight control hydraulic failure. CW2 Edgette, who was the PC, and CW2 Dominique, the PI, first noticed that the MASTER CAUTION, #2 HYDRAULIC, and #2 AFCS lights flickered twice, and then illuminated steadily. They immediately informed the crewmembers and had them check for abnormal temperatures, pressures, or leaks. The flight engineer (FE) checked and confirmed that all pressures and temperatures were normal. CW2 Edgette and CW2 Dominique then executed the proper emergency procedure.

As CW2 Dominique maintained control of the aircraft, CW2 Edgette turned on the #2 power transfer unit and informed flight lead and the air mission commander (AMC) of the situation. However, only a couple of seconds later the flight engineer instructor discovered a massive hydraulic leak coming from an unknown source in the aft transmission area. The FE, who was monitoring the maintenance panel, then announced that the #2 hydraulic pressure had dropped to zero.

CW2 Dominique reported to CW2 Edgette that the controls were "locking up," and began adjusting the aircraft for a 200- to 300-foot rate of descent in the event of total loss of flight control movement. CW2 Edgette immediately executed the emergency procedure for dual flight control hydraulic failure, turned on the #1 power transfer unit, announced that he had the controls, and informed the rest of the crew and the AMC they were "going down." He also turned on the IR landing light and ensured the brakes were released.

After confirming both his and CW2 Edgette's shoulder harnesses were locked, CW2 Dominique started the auxiliary power unit (APU) and manned the flight controls so they could work together to maintain the aircraft's attitude and ensure a safe landing. CW2 Edgette and CW2 Dominique had to maneuver the aircraft—with a total lack of flight control movement—over several deep washouts and terrain unsuitable for a safe rolling landing. They finally were able to land the aircraft in a dry riverbed with no injuries to the crew or serious damage to the aircraft. The emergency lasted only 30 to 45 seconds.

The clear thinking, expeditious decisions, professionalism, superb crew coordination, and precise situational awareness of the entire crew facilitated the positive outcome of this situation. ♦

—Julie Shelley, Staff Editor, *Flightfax*, U.S. Army Safety Center, DSN 558-1218 (334-255-1218), e-mail julie.shelley@safetycenter.army.mil

Emergency Procedures

A growing concern with the UH-60 community has developed regarding the proper actions during emergency procedures. The purpose of this STACOM is to help the UH-60 community better understand the options that are available to the pilot. We will use the Stabilator Auto Mode emergency procedure as an example.

Much debate has arisen over **WHEN** and **WHERE** to slew or **NOT** to slew the stabilator during an auto mode failure. Adding to that, the response to the emergency procedure can vary widely depending upon the situation, making the understanding of this system critical.

The UH-60 Operator's Manual states that for a Stabilator Auto Mode failure, you must perform the following steps:

1. Cyclic-mounted stabilator slew-up switch—Adjust, if necessary, to arrest or prevent nose-down pitch rate.

2. AUTO CONTROL switch—Press ON once after establishing a comfortable airspeed.

So let's clearly address the "**WHEN** to slew-up" issue. **ANYTIME the pilot feels the need to arrest a developing, or prevent a further, nose-down pitch rate from occurring**, then slewing the stabilator UP is appropriate.

WHERE to slew is not necessarily your first concern—it's AIRCRAFT CONTROL—i.e., **ARRESTING** or **PREVENTING** the nose-down pitch rate. Once aircraft control can be assured, then we can address the appropriate position to slew the stabilator more definitively. An example of this might be during an accelerated takeoff and a STAB AUTO MODE failure occurs. If the acceleration is continued, the stabilator would have to be slewed up to arrest the developing nose-down pitch rate. The **WHERE** to slew the stabilator is based upon the

handling characteristics of the aircraft. You must slew it up far enough to prevent further nose-down pitch rates from occurring for the desired flight profile you have selected.

The **WHERE** issue is further addressed based upon information not necessarily covered in the UH-60 Operator's Manual. Slewing the stabilator to any position other than *zero and continuing* a typical accelerative takeoff profile can result in demanding more aircraft power, increasing mast extension stress, and potentially imposing further risk to longitudinal control, especially if a subsequent emergency were to occur (i.e., an engine failure where the collective would need to be adjusted down). *Therefore, if the situation lends itself to being able to slew to zero, this would be the best choice*.

To aid instructor pilots (IPs) in training this task, it should be clear there are different "**WHEN to slew**" scenarios and two distinct stabilator response options. One is if a continued acceleration is desired to an airspeed above 40 knots, then **WHEN** to slew is immediately to arrest or prevent a developing nose-down pitch rate. Therefore, the stabilator should be slewed to zero if you plan to continue the acceleration. After reaching your established comfortable airspeed, then perform step two: **AUTO CONTROL RESET** - Press ON once.

The other scenario is that if holding a specific airspeed during the takeoff sequence wouldn't have a negative effect on the mission, then the option of announcing "not slewing" and "establishing a comfortable airspeed" can occur, allowing step two to be accomplished in a timely manner. Keep in mind applying critical information from the stabilator warning must be considered as well.

Remember WHEN to slew the stabilator up = anytime the pilot needs to arrest or prevent the nose-down pitch rate. Aircraft control is the most important factor.

WHERE to slew the stabilator is secondary, but has a significant affect in ARRESTING OR PREVENTING further nose-down excursions; therefore, slewing the stabilator to zero enhances longitudinal control margins and increases power availability during acceleration.

Lastly, IPs should train emergency procedures in all flight modes, considering all of the various mission scenarios we will train and fight in. Stabilator Auto Mode failures, as well as various other malfunctions, should be trained NOT ONLY during takeoff profiles but also at a hover, in cruise flight, and on final approach. Instructor pilots need to be creative on how and when to introduce emergencies, which add to obtaining a better understanding of the effect the emergency has on the aircraft's handling characteristics. Train the different options available and then match the best option for that situation.

—CW3 Kenneth R. Czarnecki is a UH-60A/L SP/IE for the Directorate of Evaluation and Standardization at Fort Rucker, AL. He can be reached at kenneth.czarnecki@rucker.army.mil .

Standardization communications (STACOMs) are prepared by the Directorate of Evaluation and Standardization (DES), USAAVNC, Fort Rucker, AL 36362-5208, DSN 558-2603/2442. Information published in STACOMs may precede formal staffing and distribution of Department of the Army official policy. Information is provided to commanders to enhance aviation operations and training support.

Parting Shots: Safety Sends...

"Safety Sends"* is a new Army Safety Campaign Plan initiative to help keep senior leaders abreast of current accidents and their impact on combat readiness. Composed weekly by the Director of Army Safety, *"Safety Sends"* is provided to general officers and features summaries of accident trends and snapshots of accidents that occurred recently, including contributing factors. Each month, *Countermeasure* and *Flightfax* will feature a condensed *"Safety Sends"* message. Below is a summary of the first *"Safety Sends."

We are an Army at war, and it is a fast-moving train with over a quarter-million Soldiers moving in one direction or another. Every Soldier and piece of equipment in this fight counts. Fatalities continue to rise, and we have two enemies in this war: the human enemy and accidents. Since World War I over half of our wartime losses have been due to accidents—not the enemy. As professionals we study the art of war in great detail, but that study is focused only on the enemy, not accidents.

The Acting Secretary of the Army, Chief of Staff, Army, and Sergeant Major of the Army fully recognize the importance of engaging both enemies. The strategic message is clear: the most potent weapons against accidental losses are leader involvement and accountability across the force. Each of us must commit to the fight and get the message down to first-line leaders and individual Soldiers. Conducting small operations with junior leadership safely is our challenge, and nothing we do will be effective unless we make safety personal.

Over the last 6 months, the Army Safety Center has made great strides to develop and refine digital tools to attack this undeclared enemy. This is the first step in making the study of accidental losses easier and an integral part of our culture. Visit our Web site at **https://safety.army.mil**. First-line supervisors should use these tools in their risk management process. The Risk Management Information System (RMIS)—the Safety Center's accident database—recently became more accessible than ever to supervisors wanting vital accident statistics, and getting a password for the protected RMIS site is now at the touch of a button. All you need is an Army Knowledge Online (AKO) account. The new "Login" link found on the Safety Center Web site uses your AKO password for all our tools, including the new Accident Reporting Automation System (ARAS) and the Army Safety Management Information System (ASMIS). Now you don't have to remember another user name and password!

Privately owned vehicle (POV) accidents continue to be one of our greatest challenges in reducing fatalities. The POV module of ASMIS-1 has been on the street for just over 2 months and already has 7,700 registered users and over 5,000 risk assessments on file. We recently reviewed 109 POV accidents and found that only one user had been involved in a crash, and he was a passenger! This shows the system is connecting with the digital generation. If you really want to make a difference in your formation, mandate that a printed copy of your Soldiers' POV assessments be attached to leave and pass forms. The ASMIS-1 system can be accessed through the Safety Center's Web site at **https://safety.army.mil/asmis1/**.

We have the right focus on the main operations, but we aren't getting it right in our supporting efforts—those small convoys and single-ship aircraft missions. We haven't adequately prepared our junior leaders, who must execute these missions with the right skills, education, and access to knowledge to make good risk decisions. Focusing on pre-mission planning, troop-leading procedures, and pre-combat checks is critical. Thanks for taking the time to hang in there. We are at your disposal and will help in any and every way to protect the force as we fight the Global War on Terrorism. ♦

BG Joe Smith
Director of Army Safety

ACCIDENT BRIEFS

Information based on preliminary reports of aircraft accidents

AH-64

A Model

■ **Class A (Damage):** The crew was conducting a night reconnaissance mission under the forward looking infrared at a training center. After completing a three-way positive control transfer so the backseat pilot could change a radio frequency, the copilot gunner (on the controls) became spatially disoriented and allowed the aircraft to descend with near-zero forward airspeed. The tailboom struck a tree, causing a loss of tail rotor thrust, before the crew could recover the aircraft from the descent. The aircraft continued its descent into the trees and crashed onto its right side. Both crewmembers egressed the aircraft uninjured.

CH-47

D Model

■ **Class C:** While performing a 30-minute ground run after an engine upgrade, the #1 generator failed, causing the XSMN AUX OIL PRESS light to illuminate. The crew immediately shut down the aircraft. A black ring was found around the generator on post-flight inspection, and the aft transmission filter was popped. A serviceability check the following morning showed a large amount of debris. It is suspected that the generator shaft sheared and caused foreign object damage to the transmission.

OH-58

C Model

■ **Class C:** Two aircraft made contact during flight. The aircraft were flying in the same area, and both crews had acknowledged each other before the accident. The number one aircraft initiated a left turn near the ACP, crossing in front of the number two aircraft. Neither crew believed the two aircraft had touched. Post-landing inspection revealed Class C damage to the main rotor blades of the number one aircraft and to the tail rotor blades of the number two aircraft.

D(I) Model

■ **Class C:** Aircraft experienced a mast overtorque condition as the crew was attempting to avoid wires at 200 feet above ground level. One main rotor blade and the vertical fin contacted the wires. No other details were reported.

UH-60

A Model

■ **Class B:** Aircraft encountered blowing snow during landing to a cleared strip. All four main rotor blades contacted trees. The aircraft was shut down without further incident.

■ **Class B:** The main rotor system contacted the fuselage and severed the tail rotor driveshaft while the crew was conducting a roll-on landing. The roll-on landing was being performed as part of aircraft qualification course training with a non-rated student pilot on the controls. The accident is under investigation.

UC-35

A Model

■ **Class B:** Both engines were suspected to have exceeded speed limitations during climbout while departing the local airfield. A download of the engine data recorder confirmed overspeed conditions on both engines.

■ **Class C:** The aircraft's #1 engine speed registered at 103 percent during descent. Post-flight maintenance inspection confirmed damage to the engine.

RQ-7

Shadow Model

■ **Class B:** Air vehicle suffered Class B damage after experiencing a reported generator failure during flight. Both the vehicle and its payload were destroyed in the crash.

■ **Class C:** Air vehicle experienced generator voltage regulator failure during flight, followed by a landing system failure. The flight termination system parachute deployed, and the vehicle hit the ground about 1 mile short of the airfield.

Editor's note: **Information published in this section is based on preliminary mishap reports submitted by units and is subject to change. For more information on selected accident briefs, call DSN 558-9552 (334-255-9552) or DSN 558-3410 (334-255-3410).**

2004 ALSE Users Conference

The dates for the 2004 ALSE Users Conference are 24-26 August 2004 at the Huntsville Hilton in Huntsville, AL, in which 150 rooms have been set aside if you wish to make your reservations now. Contact Melanie Barksdale at PM Air Warrior for more information, DSN 746-4703 (256-876-4703) or e-mail Melanie.barksdale@peoavn.redstone.army.mil.

LEARN FROM THE MISTAKES OF OTHERS...

YOU WON'T LIVE LONG ENOUGH TO MAKE ALL OF THEM YOURSELF.